CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/WNo.13/KRIDL/CSR-09/134a/CEMENT/2016-17 Date: 03.09.2016

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*AGENCY	:	**Technical Manager (West),** KRIDL, Bangalore.
*NAME OF THE WORK	:	Construction of RCC drains at Kalyananagara balance roads and 5th, 6th Cross 2 (Either) side, near Rajanna Bakery side, 1st Main, 1st A Cross either side, 2nd A & B Cross 1 side attached to Dasarahalli Main Road Shettyhalli Sub Division in Ward No. 13, BBMP, Bangalore.
REFERENCE	:	AEE/SSD/PR/56/2016-17 Dated: 02.09.2016
SAMPLE ID	:	Cement – Sample 6
SAMPLE RECEIVED ON	:	02.09.2016
PERIOD OF TESTING	:	02.09.2016 to 03.09.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00%	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	125 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	450 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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VISHWANATH .C
Quality Manager

AE-13
2/9

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ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ಬಿಬಿಎಂಪಿ ಪಶ್ಚಿಮ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ಕೃಷ್ಣ, ಕಾವೇರಿನಗರ, ಬೆಂಗಳೂರು

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Job No.: CTCE/BBMP/WNo.13/KRIDL/CSR-09/134a/SAND-Gradation/2016-17 : 03.09.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

* **Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

* **Agency** : **Technical Manager (West),** KRIDL, Bangalore.

* **Name of Work** : Construction of RCC drains at Kalyananagara balance roads and 5th, 6th Cross 2 (Either) side, near Rajanna Bakery side, 1st Main, 1st A Cross either side, 2nd A & B Cross 1 side attached to Dasarahalli Main Road Shettyhalli Sub Division in Ward No. 13, BBMP, Bangalore.

Reference : AEE/SSD/PR/56/2016-17 Dated: 02.09.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates - Sample 6

Sample Received on : 02.09.2016

Date of Testing : 03.09.2016

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	92.86	90-100	90-100	90-100	95-100
2.36	78.47	60-95	75-100	85-100	95-100
1.18	57.63	30-70	55-90	75-100	90-100
600 Micron	38.37	15-34	35-59	60-79	80-100
300 Micron	15.48	5-20	8-30	12-40	15-50
150 Micron	2.67	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Civil-Tech Consultants & Engineers Bangalore

Remarks : This sample is under Zone-II specific limits.

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VISHWANATH .C
Quality Manager

AG-13

3/9

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Job No.: CTCE/BBMP/WNo.13/KRIDL/CSR-09/134a/AGG/GR/2016-17 : 03.09.2016

TEST REPORT ON COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	: Construction of RCC drains at Kalyananagara balance roads and 5th, 6th Cross 2 (Either) side, near Rajanna Bakery side, 1st Main, 1st A Cross either side, 2nd A & B Cross 1 side attached to Dasarahalli Main Road Shettyhalli Sub Division in Ward No. 13, BBMP, Bangalore.
Reference	: AEE/SSD/PR/56/2016-17 Dated: 02.09.2016
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm) - Sample 6
Sample Received on	: 02.09.2016
Date of Testing	: 03.09.2016

Total Wt. of Aggregates in gms= **7000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.93	95-100	85-100
20	33.86	30-70	0-20
10	12.63	10-35	0-5
4.75	1.36	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/WNo.13/KRIDL/CSR-09/134a/AGG/GR/2016-17 : 03.09.2016

TEST REPORT ON COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	: Construction of RCC drains at Kalyananagara balance roads and 5th, 6th Cross 2 (Either) side, near Rajanna Bakery side, 1st Main, 1st A Cross either side, 2nd A & B Cross 1 side attached to Dasarahalli Main Road Shettyhalli Sub Division in Ward No. 13, BBMP, Bangalore.
Reference	: AEE/SSD/PR/56/2016-17 Dated: 02.09.2016
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (20mm) - Sample 6
Sample Received on	: 02.09.2016
Date of Testing	: 03.09.2016

Total Wt. of Aggregates in gms= **5000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
40	100	100	100
20	96.92	95-100	85-100
10	29.88	25-55	0-20
4.75	3.06	0-10	0-5

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits

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VISHWANATH .C
Quality Manager

AE-13

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Job No.: CTCE/BBMP/WNo.13/KRIDL/STEEL/2016-17 03.09.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of the Work : Construction of RCC drains at Kalyananagara balance roads and 5th, 6th Cross 2 (Either) side, near Rajanna Bakery side, 1st Main, 1st A Cross either side, 2nd A & B Cross 1 side attached to Dasarahalli Main Road Shettyhalli Sub Division in Ward No. 13, BBMP, Bangalore.

Reference : AEE/SSD/PR/56/2016-17 Dated: 02.09.2016

Date of Test : 03.09.2016

Technical Reference : IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	8	0.40	512	553	13.10	O.K	O.K

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ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ಕಸ್ತೆ, ಶಿವೀಂಪ್ರನಗರ

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Job No.: CTCE/BBMP/WNo.13/KRIDL/STEEL/2016-17 03.09.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	:	Construction of RCC drains at Kalyananagara balance roads and 5th, 6th Cross 2 (Either) side, near Rajanna Bakery side, 1st Main, 1st A Cross either side, 2nd A & B Cross 1 side attached to Dasarahalli Main Road Shettyhalli Sub Division in Ward No. 13, BBMP, Bangalore.
Reference	:	AEE/SSD/PR/56/2016-17 Dated: 02.09.2016
Date of Test	:	03.09.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	514	558	13.30	O.K	O.K

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Job No.: CTCE/BBMP/WNo.13/KRIDL/CSR-09/134a/CUBE/2016-17 13.09.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager (West),** KRIDL, Bangalore.
* Name of the work	: Construction of RCC drains at Kalyananagara balance roads and 5th, 6th Cross 2 (Either) side, near Rajanna Bakery side, 1st Main, 1st A Cross either side, 2nd A & B Cross 1 side attached to Dasarahalli Main Road Shettyhalli Sub Division in Ward No. 13, BBMP, Bangalore.
Reference	: AEE/SSD/PR/56/2016-17 Dated: 02.09.2016
* Sample ID	: RCC Drain Bed Slab Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
* Grade of Concrete	: M_{20}
Compressive Strength as on	: 7^{th} day
Sample Received on	: 13.09.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	06.09.2016	13.09.2016	8.123	338.9	15.06
2	06.09.2016	13.09.2016	8.237	352.5	15.67
3	06.09.2016	13.09.2016	8.319	364.7	16.21

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VISHWANATH .C
Quality Manager

AE-13
13/9

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